

IMPROVEMENTS RELATED TO TELEPHONES

The invention relates to improvements to telephone systems. In particular, the invention relates to method  
5 and apparatus for enabling effective advertising or the passing on of supplementary information using the telephone system.

Up until now, conventional advertising has been  
10 achieved by means of radio, TV, or other conventional media such as newspapers, magazines, etc. Increasingly, cold calling has gone ahead by representatives of companies using the telephone system. However, such cold calling by individuals is often un-appreciated by the recipient of the  
15 phone call and, often, the person receiving the calls will resort to any excuse to try and, reasonably politely, make their excuses to end the telephone conversation. Also, from the advertising company's point of view, it is often a thankless task cold calling since it is necessary to employ  
20 telesales staff who run the risk of frequently being verbally abused by house holders.

According to a first aspect of the invention, there is provided a method for transmitting pre-recorded messages  
25 using a telephone network, whereby when telephone call apparatus is used by a caller to contact a recipient, a message is audibly transmitted from messaging equipment to the user to replace a conventional ringing tone.

30 Preferably, during transmission of the message, the telephone call apparatus is answered by the recipient then the message is arranged to terminate.

Preferably, the message is used in conjunction with traditional telephone ringing tones relayed to the caller so that if the telephone call apparatus is not answered by the recipient during a predetermined time period, the message which the caller hears is replaced by the conventional ringing tone.

A second aspect of the invention concerns a method for transmitting pre-recorded messages using a telephone network, in which a recipient of the telephone call hears a pre-recorded message upon picking up a ringing telephone, the message being relayed, prior to connection between caller and recipient being effected.

In the above aspects, it is preferred that a message is heard by a person making a telephone call prior to connection between caller and recipient being established.

The message heard by the recipient is preferably the same message as that heard by the caller.

The message preferably has an advertising and/or information content.

Preferably, statistical feed back concerning the number of times a given message was transmitted and, more importantly, the number of times a telephone was answered following transmission of a message is provided to an information provider.

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Preferably, messages are conveyed only to telephone system users who have indicated a willingness to receive such messages.

Preferably, telephone users accepting such messaging are provided with telephone calls at subsidised prices.

5       The subsidy may be borne by providers of the messaging service.

The user is preferably provided with the capability of choosing the type of messages they wish to receive.

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According to a third aspect, there is provided apparatus for implementing a method according to any of the preceding claims, in which the apparatus comprises: means for detecting a signal on a telephone line  
15 indicating that there is an incoming telephone call; and means for responding to this detecting for replacing a traditional telephone ringing tone with the message.

Timer means are preferably provided for terminating  
20 the message after a predetermined time period and substituting therefor the telephone ringing tone.

Preferably, the apparatus further includes means for terminating the message subsequent to a user picking up a  
25 telephone receiver at a call receiving end.

Preferably, said apparatus comprises telephone exchange apparatus.

30       Preferably, the telephone exchange may be configured so as to convey such messages only to telephone system users who have indicated a willingness to receive such messages.

Telephone system users are preferably provided with telephone calls at subsidised prices.

- 5        The subsidy is preferably borne by providers of the messaging service.

Preferably, a system user is provided with the capability of choosing the type of messages they wish to  
10 receive.

The message may be audibly or visually transmitted to a caller during a predetermined time period.

- 15        The telephone call apparatus may comprise a telephone receiver or computer or other device referred to simply as telecom apparatus.

The telecom apparatus may be a domestic or commercial  
20 telephone.

The predetermined time period, in a preferred embodiment, is five seconds. However, it will be appreciated that alternative time durations may be possible  
25 or desirable.

In preferred embodiments, the predetermined time period may be selected by an advertising organisation. The advertising organisation may pay a messaging service  
30 provider according to the length of the predetermined time period or other criteria such as the particular time during the day in which a particular message is to be transmitted when an incoming call is detected.

For a better understanding of the invention, and to show how embodiments of the same may be carried into effect, reference will now be made, by way of example, to the accompanying diagrammatic drawing, in which:

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Figure 1 is a schematic block diagram showing how a system in accordance with the principles of the present invention may be implemented. Referring now to the Figure, there is shown schematically caller equipment 1, recipient's equipment 2, a telephone exchange 3 and add on equipment 4.

The caller equipment 1 and recipient equipment 2 are standard existing equipments (at least in the preferred embodiment). In other words, they represent conventional telephone call transmitting/receiving equipment (hereinafter referred to as telephones). Also, the exchange equipment 3 is basically standard but interfaces with add on equipment 4. The add on equipment 4 is triggered by an originating caller 1 dialling a number corresponding to the telephone number of the recipient caller equipment 2. When detecting a call from equipment 1 to equipment 2, the add on equipment 4 is arranged to transmit a message to the originator caller prior to the ringing tone. In other words, while the caller using equipment 1 is making a telephone call to recipient equipment 2, instead of hearing the ringing tone, the first few seconds of the ringing tone are replaced with a message which the caller will hear. The recipient, when answering the telephone call using the recipient telephone apparatus 2, will, instead of being connected straight away to the originating caller initially hear the message from add on equipment 4. In this manner, messages of an informative

and/or advertising nature may be passed using the telephone network.

5 The reader's attention is directed to all papers and documents which are filed concurrently with or previous to this specification in connection with this application and which are open to public inspection with this specification, and the contents of all such papers and documents are incorporated herein by reference.

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All of the features disclosed in this specification (including any accompanying claims, abstract and drawings), and/or all of the steps of any method or process so disclosed, may be combined in any combination, except 15 combinations where at least some of such features and/or steps are mutually exclusive.

Each feature disclosed in this specification (including any accompanying claims, abstract and drawings), may be 20 replaced by alternative features serving the same, equivalent or similar purpose, unless expressly stated otherwise. Thus, unless expressly stated otherwise, each feature disclosed is one example only of a generic series of equivalent or similar features.

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The invention is not restricted to the details of the foregoing embodiment(s). The invention extends to any novel one, or any novel combination, of the features disclosed in this specification (including any accompanying 30 claims, abstract and drawings), or to any novel one, or any novel combination, of the steps of any method or process so disclosed.

CLAIMS

1. A method for transmitting pre-recorded messages using a telephone network, whereby when telephone call apparatus is used by a caller to contact a recipient, a message is audibly transmitted from messaging equipment to the user to replace a conventional ringing tone.
2. A method according to claim 1, wherein if, during transmission of the message, the telephone call apparatus is answered by the recipient then the message is arranged to terminate.
3. A method according to claim 2, wherein the message is used in conjunction with traditional telephone ringing tones relayed to the caller so that if the telephone call apparatus is not answered by the recipient during a predetermined time period, the message which the caller hears is replaced by the conventional ringing tone.
4. A method for transmitting pre-recorded messages using a telephone network, in which a recipient of the telephone call hears a pre-recorded message upon picking up a ringing telephone, the message being relayed, prior to connection between caller and recipient being effected.
5. A method according to the preceding claims, wherein a message is heard by a person making a telephone call prior to connection between caller and recipient being established.

6. A method according to claim 5, wherein the message heard by the recipient is the same message as that heard by the caller.

5 7. A method according to any of the preceding claims, wherein the message has an advertising and/or information content.

8. A method according to any of the preceding claims,  
10 wherein:

statistical feed back concerning the number of times a given message was transmitted and, more importantly, the number of times a telephone was answered following  
15 transmission of a message is provided to an information provider.

9. A method according to any of the preceding claims, wherein messages are conveyed only to telephone system  
20 users who have indicated a willingness to receive such messages.

10. A method according to any of the preceding claims, in which telephone users accepting such messaging are  
25 provided with telephone calls at subsidised prices.

11. A method according to claim 10, in which the subsidy is borne by providers of the messaging service.

30 12. A method according to any of the preceding claims, in which a user is provided with the capability of choosing the type of messages they wish to receive.



13. Apparatus for implementing a method according to any of the preceding claims, in which the apparatus comprises:

means for detecting a signal on a telephone line  
5 indicating that there is an incoming telephone call; and

means for responding to this detecting for replacing a traditional telephone ringing tone with the message.

10 14. An apparatus according to claim 13, in which timer means are provided for terminating the message after a predetermined time period and substituting therefor the telephone ringing tone.

15 15. Apparatus according to claim 13 or 14, in which the apparatus further includes means for terminating the message subsequent to a user picking up a telephone receiver at a call receiving end.

20 16. Apparatus according to claim 13, 14 or 15, in which said apparatus comprises telephone exchange apparatus.

17. Apparatus according to claim 16, in which the telephone exchange may be configured so as to convey such  
25 messages only to telephone system users who have indicated a willingness to receive such messages.

18. Apparatus according to any of claims 13 to 17, in which telephone system users are provided with telephone  
30 calls at subsidised prices.

19. Apparatus according to claim 18, wherein the subsidy is borne by providers of the messaging service.

20. Apparatus according to any of claims 13 to 19, in which a system user is provided with the capability of choosing the type of messages they wish to receive.

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21. A method for transmitting pre-recorded messages, substantially as herein described with reference to the accompanying drawings.

10 22. Apparatus for implementing a method for transmitted pre-recorded messages, the apparatus being substantially as herein described with reference to the accompanying drawing.



Application No: GB 9927239.5 Examiner: Richard Howe  
Claims searched: 1 and it's dependent claims Date of search: 10 March 2000

## Patents Act 1977 Search Report under Section 17

### Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK CI (Ed.R): H4K (KF42)

Int CI (Ed.7): H04M 3/487

Other: Online : epodoc

### Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
A	EP 0 827 321 A2 (Zerosei) - see abstract	
A	EP 0 713 317 A1 (Borbon) - see abstract	

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.

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(51) INT CL<sup>5</sup>

H04M 3/42

(52) UK CL (Edition L)

H4K KFD

(56) Documents cited

None

(58) Field of search

UK CL (Edition K) H4K KFD KFH KFM KOT KQG

INT CL<sup>5</sup> H04M

## (54) Improvements in or relating to telephone call monitoring systems

(57) Telephone apparatus comprising telephone line switch means 1 via which predetermined telephone lines are made available to a telephone user board 3, which user board serves to facilitate selection of one or more of the said predetermined lines by a telephone user at 3a, and an activity port 7 operatively associated with the switch means via which data appertaining to telephone line usage is made available, a call management system 6 comprising a display/monitor unit 6a, a keyboard 6c and a central processor unit (CPU) 6b, the CPU being coupled to the said activity port so as to receive and store the data appertaining to telephone line usage and a voice recorder 9 for recording telephone conversations carried by the said predetermined lines, the voice recorder being operated under the control of signals produced by the CPU for the purpose of selectively retrieving predetermined recorded telephone conversations as identified by the data stored in the CPU.

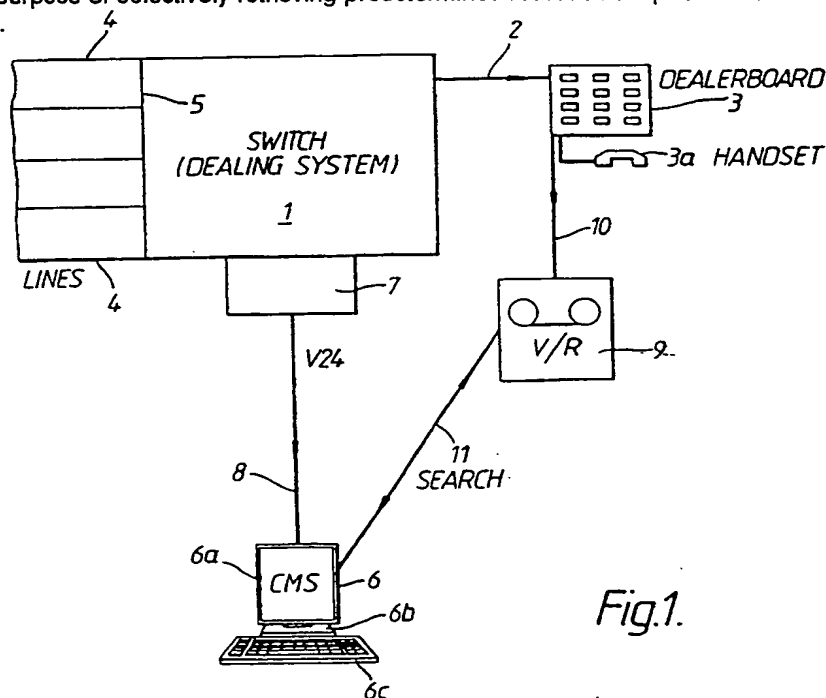


Fig.1.

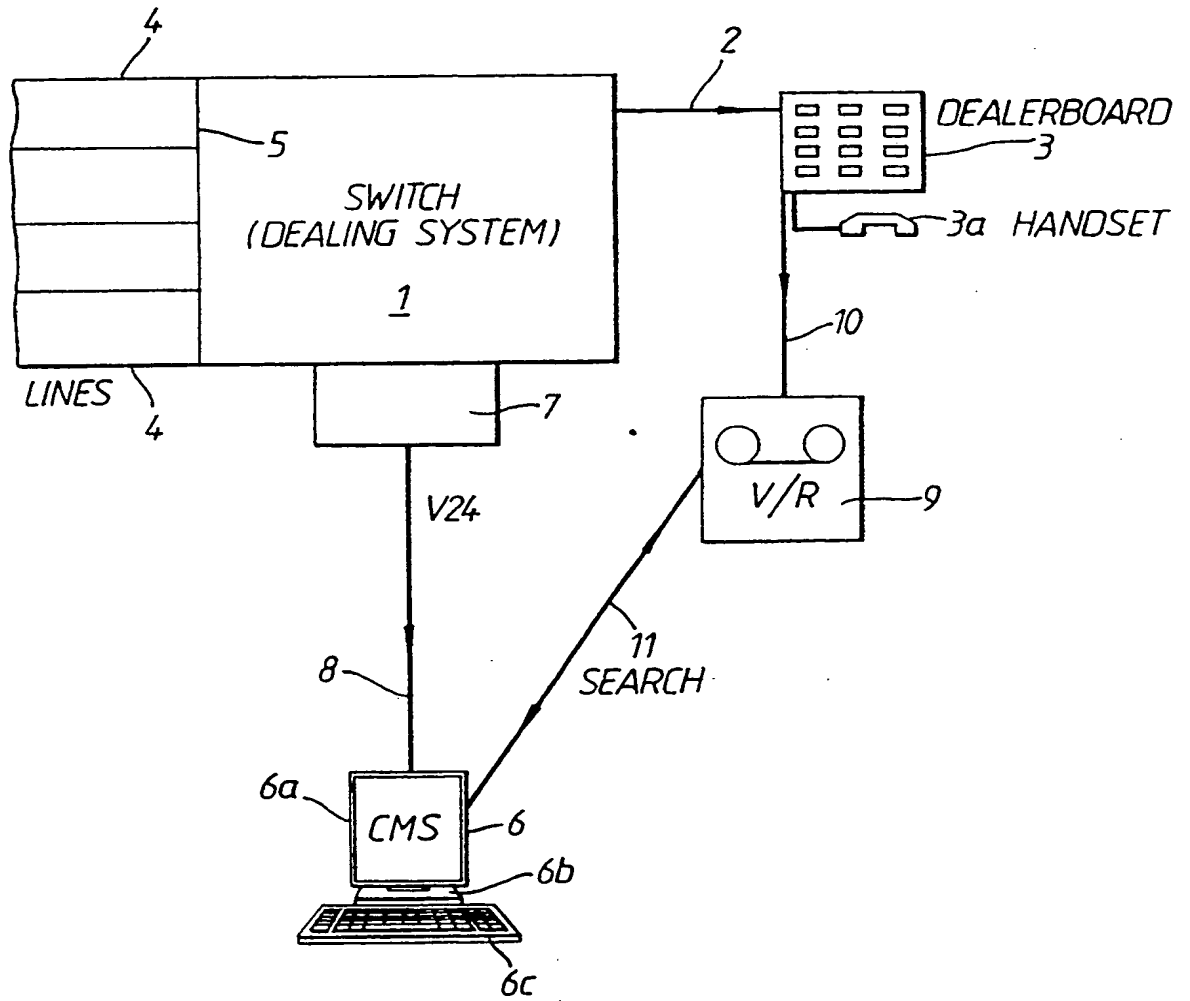


Fig.1.

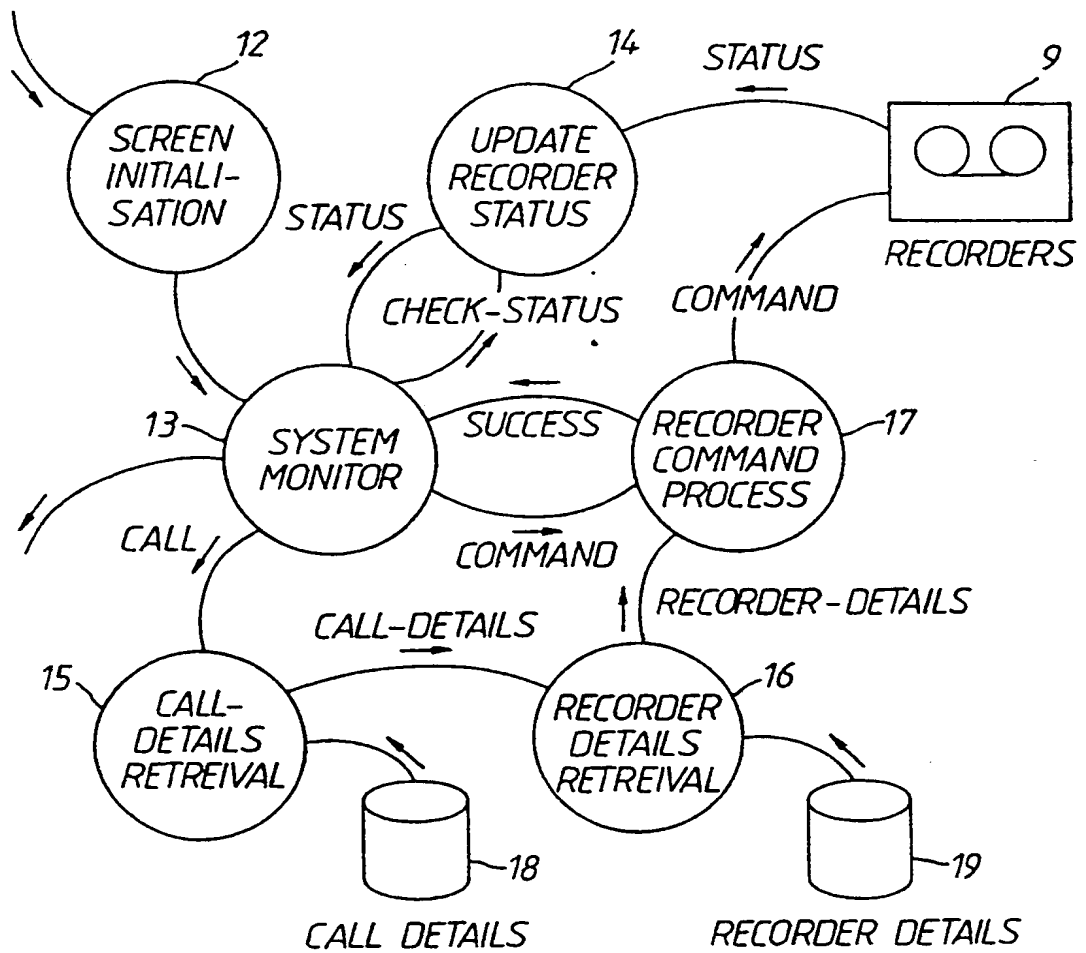


Fig.2.